VIMATOL® - PL

Water reducer/
Concrete plasticiser *

Properties

VIMATOL - PL is a liquid additive that acts as a water reducer or concrete plasticiser. It offers multiple improvements so much in the fresh as in hardened concrete.

- It contributes in the better hydration of cement, resulting in its most optimal use.
- It improves workability and pumping of concrete, by preventing the separation of the aggregates and consequently it facilitates considerably the condensation.
- It allows reduction of mixing water for constant workability.

The above improvements brought by **VIMATOL - PL** in the fresh concrete properties also have a positive effect on hardened concrete:

- Reduction of cracking due to shrinkage setting.
- Reduction of the porosity therefore and the water absorbability
- Increase of mechanical strengths

Applications

VIMATOL - PL is a significant aid in preparing high strength pumpable concrete, specifically in cases of dense reinforcement or fair-faced concrete constructions.

- **VIMATOL - P L** is added as a water reducer during concrete preparation, therefore allows reduction of mixing water provided that constant workability is required. This means reduction of Water/Cement ratio (W/C) and therefore increases the initial and final strengths. If again the increase of concrete strengths is not desirable, the reduction of quantity of cement for cost reasons is possible.

* In accordance with the standard ELOT EN 934-2:2001, Table 2. The conformation was certified by ELOT with Certification No 0365-CPD-070/01.12.01/1

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- **VIMATOL - PL** is added as plasticiser in the ready mixed concrete just before the setting, therefore increases considerably the slump flow without addition of water. Thus not only it does not decrease strengths, but brings also small increase due to better hydration of cement.

  In case of addition in the ready concrete, mixing in the truck mixer drum should last 4-5 minutes in high rotations (8-12 rounds per minute) so as to achieve a uniform distribution of **VIMATOL-PL** in the mass.

Technical Characteristics

Colour: dark brown Density: 1,14-1,20 kg/l pH: ≤ 5,0
Conciseness in water-soluble chlorine: free of chlorine
Conciseness in alkali: ≤ 1,0% by weight

Dosage

Permissible dosage: 0,3 - 0,9% by cement weight
Recommended dosage: 0,5 – 0,6% by cement weight

In order to find the best dosage in each case, some test mixtures are required.
The respective concrete compositions should be made with the materials and ratios to be used on site, as the chemical action of the additive is affected by the properties and the ratios of the other concrete components.

Effectiveness

Indicatively the effectiveness of **VIMATOL-PL**, so that the user can direct himself in the determination of the advisable dosage, is summarized in the followings:
Water Reducer:
For all the field of the allowed dosage, with reduction of mixture water from 5% until 15%, the increase of compressive strength so much afterwards 7 as afterwards 28 days is bigger than 10% (Requirements of Table 2 of standard ELOT EN 934-2)
Plasticiser:
VIMATOL-PL for the minimal dosage (0,3%) offers at least tripling of initial slump flow, while for biggest (0,9%) it corresponds in the requirements of a superplasticiser. (The ELOT EN 934-2 standard does not predict control for the action of the plasticiser, only requirements for the superplasticiser according to Table 3.2). For all the field of the

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allowed dosage the increase of the final strengths is given, while the relative standard allows for the superplasticisers reduction up to 10%.

Storage

The life span of **VIMATOL-PL** reaches the 18 months in the initial closed packing in temperature between + 5^0C and + 35^0C. The material must be protected from direct solar radiation and frost.

General Remarks

- **VIMATOL-PL** is suitable for all kinds of Portland cement.
- Overdosage may cause concrete setting retardation, this however will not effect unfavourably the final strengths
- If the material is frozen, return it to a temperature at least +5º C and stir so as to achieve its homogeneity.

! Concrete additives improve the properties of concrete significantly. However, this does not imply that Concrete Technology Regulations should not be strictly applied.

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